

REMARKS

The above-identified application is a continuation pursuant to 35 U.S.C. §1.53(b) of a continued prosecution application, filed on March 17, 1999, of U.S. application Serial No. 08/456,864, filed June 1, 1995 ("the parent application"), now issued as U.S. Patent 6,057,288, which in turn is a division of U.S. application Serial No. 08/104,487, filed August 9, 1993 ("the grandparent application"), now issued as U.S. Patent 5,591,872.

Claim 1 was pending. Claim 1 has been canceled without prejudice or disclaimer and claims 44-53 have been added in order to prosecute non-elected subject matter originally claimed in the grandparent application but subject to restriction requirements in the grandparent and parent applications. Therefore, claims 44-53 will be pending in the application upon entry of the instant Amendment.

No new matter has been added. Claims 44 and 45 correspond to claims 26 and 27, respectively, as originally filed in the grandparent application. Claims 46-48 and 51-53 correspond to claims 33-38, as originally filed in the grandparent application. Claims 49 and 50 have been added as dependent claims. Support for claim 49 can be found at least, for example, on page 7, lines 20-24, in the specification as filed. The compound of claim 50 is a species of the general formula noted in claim 49, support for which can be found at least, for example, on page 2, line 6, of the specification.

Applicants respectfully request that the Amendment be entered into the record of the application. For the Examiner's convenience, the claims that will be pending in the application upon entry of the instant Amendment are set forth in the attached Appendix A.

Cancellation of the claims should in no way be construed as an acquiescence to any of the objections and/or rejections set forth in the instant Office Action, and was done

solely to expedite the prosecution of the instant application. Applicants reserve the right to pursue the claims as originally filed in this or one or more separate applications.

Claim Rejections

Rejection of Claim 1 under 35 U.S.C. §101

Claim 1 is rejected under 35 U.S.C. §101 as claiming the same invention of claim 1 of U.S. Patent 5,591,872. Applicants submit that the rejection is moot in view of the cancellation of claim 1. Applicants further submit that the rejection is not applicable to claims 44-53 as presented herein.

CONCLUSION

In view of the foregoing, entry of the instant amendments and remarks presented above, and allowance of this application with claims 44-53 are respectfully requested. If a telephone conversation with Applicants' attorney would expedite the prosecution of the application, the Examiner is invited to call the undersigned at (617) 227-7400.

Respectfully submitted,

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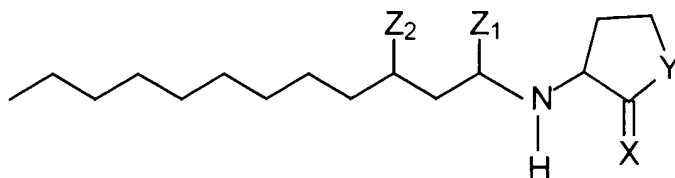
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APPENDIX A

44. (New) A method of selecting inhibitors of the autoinducer molecule of *Pseudomonas aeruginosa* comprising:
contacting the autoinducer molecule with a suspected inhibitor;
measuring the ability of the treated autoinducer molecule to stimulate the activity of a selected gene;
determining whether the suspected inhibitor inhibits the ability of the autoinducer molecule to stimulate the activity of a selected gene; and
selecting the suspected inhibitors that inhibit the autoinducer molecule.
45. (New) A method of selecting synergists of the autoinducer molecule of *Pseudomonas aeruginosa* comprising:
contacting the autoinducer molecule with a suspected synergist;
measuring the ability of the treated autoinducer molecule to stimulate the activity of a selected gene;
determining whether the suspected synergist enhances the ability of the autoinducer molecule to stimulate the activity of a selected gene; and
selecting the suspected synergists that enhance the activity of the autoinducer molecule.
46. (New) A culture medium containing as an added compound N-(3-oxododecanoyl)homoserine lactone at a concentration effective to stimulate or promote cellular metabolism, growth, or recovery.
47. (New) The culture medium of claim 46 wherein the cellular growth of *Pseudomonas aeruginosa* is stimulated or enhanced.
48. (New) A method of regulating the expression of a gene comprising:
inserting a gene into bacteria chosen for enhancement of gene expression by an agent that enhances the activity of the LasR protein; and
incubating the bacteria with an agent that enhances the activity of the LasR protein such that the expression of the gene is regulated.
49. (New) The method of claim 48, wherein the agent is a compound of the following formula:



wherein Y is O, S, or NH; X is O, S, or NH; and Z₁ and Z₂ are independently selected from the group consisting of hydrogen =O, =S, and =NH; the molecule being able to regulate gene expression.

50. (New) The method of claim 48, wherein the agent is N-(3-oxododecanoyl)homoserine lactone.

51. (New) The method of claim 48 wherein the method further comprises the additional steps of:

allowing the gene expression to reach a desired level; and
incubating the bacteria with an agent that inhibits the activity of the LasR protein regulating the gene expression by the bacteria.

52. (New) A method of regulating the expression of a gene comprising:
inserting a gene into a cell chosen for enhancement of gene expression by N-(3-oxododecanoyl)homoserine lactone; and
incubating the cell with N-(3-oxododecanoyl)homoserine lactone such that the expression of the gene is regulated.

53. (New) The method of claim 52 wherein the method further comprises the additional steps of:

allowing the gene expression to reach a desired level; and
incubating the cell with an agent that inhibits the activity
N-(3-oxododecanoyl)homoserine lactone regulating the gene expression by the cell.